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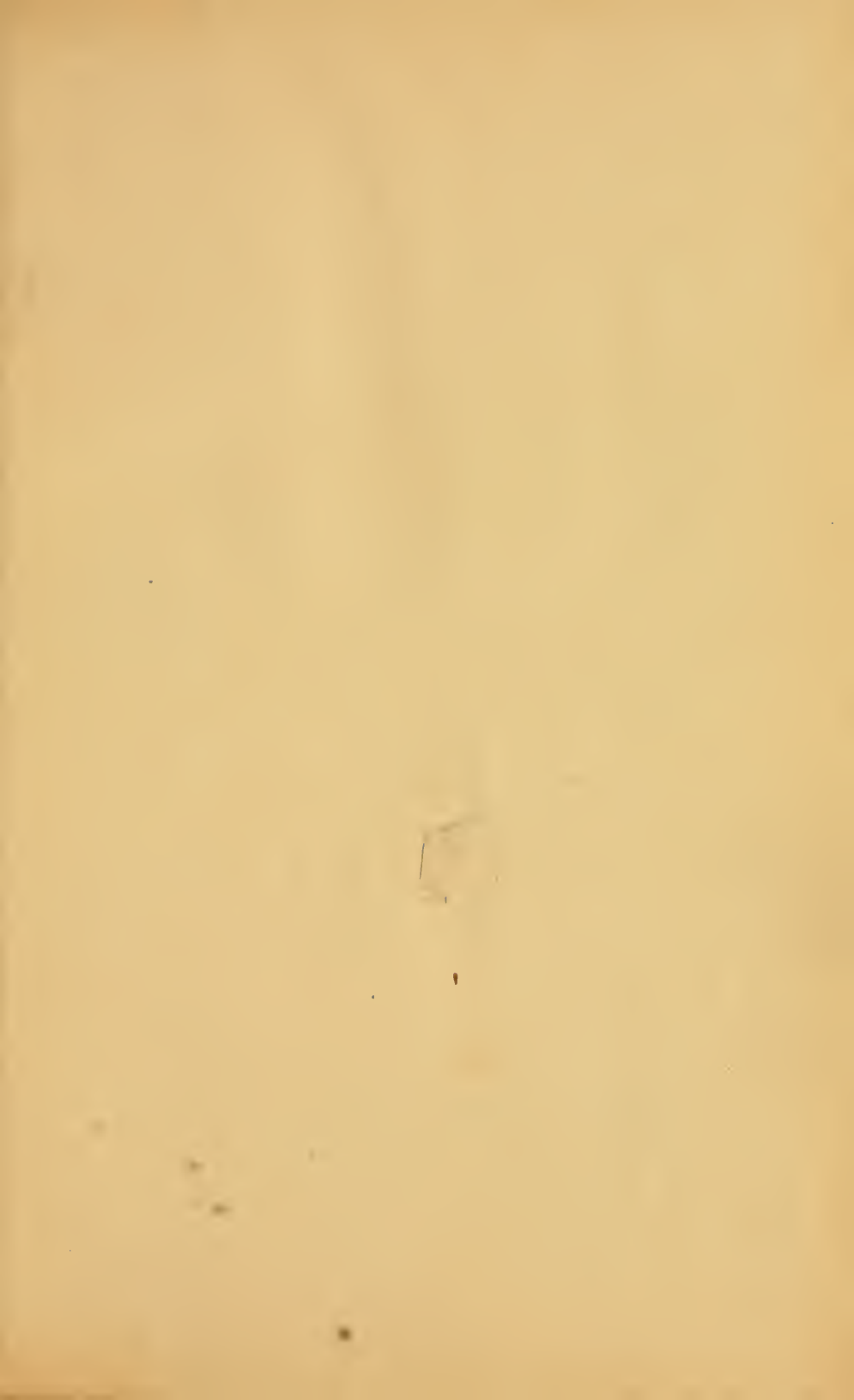
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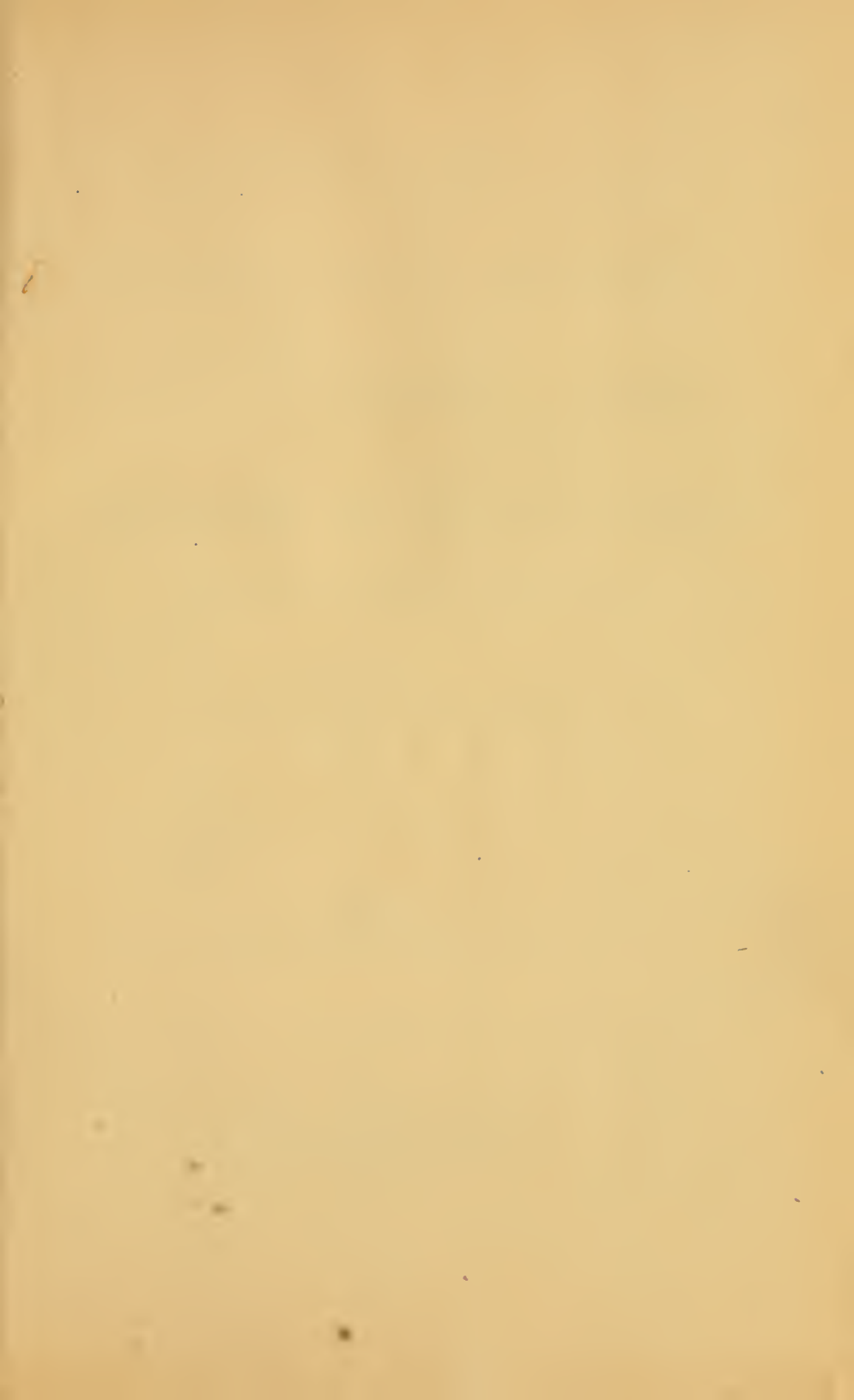
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ASPECTS OF EDUCATION

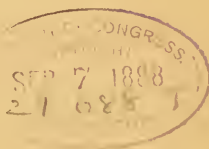
A Study in the History of Pedagogy

BY

OSCAR BROWNING, M. A.,

Kings College, Cambridge.

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EDITED BY
NICHOLAS MURRAY BUTLER, Ph.D.,
President of the Industrial Education Association.



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PREFATORY NOTE

The several chapters of this Monograph appeared as separate articles in *Science*, during 1887 and 1888. After careful revision by the author, they are now reproduced as a single treatise, and offered as a valuable contribution to the critical history of educational doctrines.

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ASPECTS OF EDUCATION

HUMANISM.

I

Since the revival of learning, secondary education in Europe has passed through three phases, which may be conveniently called humanism, realism, and naturalism. The first is grounded upon the study of language, and especially of the two dead languages, Greek and Latin. The second is based upon the study of things instead of words, the education of the mind through the eye and the hand. Closely connected with this, is the study of those things which may be of direct influence upon and direct importance to life. The third is not, in the first instance, study at all. It is an attempt to build up the whole nature of the man; to educate, first his body, then his character, and lastly his mind. All theories of education which have taken a practical form during the last three hundred years may be ranged under one or other of these three heads. Modern education, as we know it, is an unconscious, but not the less a real, compromise between the three ends. If we consider each separately, we shall be in the best position to understand the system to which they have given rise.

It is important to remember that the reformation in Europe happened at the time when the best European intellects were directed towards the study of the classics. This was not a mere coincidence. The revival of learn-

ing, as it is called, that is, the closer and more intimate acquaintance with Greek and Latin texts, which had before been known through translations and paraphrases, was in itself the principal cause of a reformation. The critical spirit thus engendered, the dissatisfaction aroused with the teaching of the old religion, the revolt against the schoolmen, were also efficient in bringing about the reformation. The education of the middle ages was encyclopædic, in aim if not in reality. The seven-years course of study—*trivium* and *quadrivium*—was intended to comprise every thing that a man need know. Grammar taught the whole science of words, dialectics furnished a scholar with the whole armor of argument, rhetoric invested him not only with eloquence in speech but with the more graceful gifts of poetry and imagination. The science of music, the science of numbers, the power of measuring the earth and the heavens, furnished out the completely educated man. Hand-books of the middle ages intended for students cover the whole ground of human knowledge. The 'Trésor' of Brunetto Latini, the master of Dante, is divided into three books; the first book into five parts, the last two into two parts each. The first book speaks of the origin of all things. After this comes philosophy, divided into its two component parts of theory and practice. Theory has three great divisions,—theology, the knowledge of God; physics, the knowledge of the world; and mathematics, the knowledge of the four sciences which form the *quadrivium*. Practice has also three divisions,—ethics, to teach us how to govern ourselves; economics, to teach us how to govern our family and our belongings; and politics, the highest of all sciences and the most noble of human occupations, which teaches us to govern towns, kingdoms, and nations, in both peace and war. As a prelude to these nobler sciences stand the preliminary arts of grammar, dialectics, and rhetoric.

It is true that before the reformation this noble plan of education had become narrowed and formalized. The church had pressed all knowledge into its service, and no form of knowledge was highly valued which did not contribute to the service of the church. The methods of teaching became corrupted: memory was substituted for thought. There was a striking contrast between the high aims of the best part of the middle ages and the scanty attainments of its decadence; but the shell was still there, and as long as that remained, life might be poured into it.

The renaissance swept away this effort as a dream. Scholars brought face to face with Virgil and Horace, with Cicero and Plato, were so won by the charm of a new and marvellous language, that all their strength was spent in explaining and appreciating it. The literary results of the renaissance were twofold. On the one hand, it aroused the pure enjoyment of literary form and expression; on the other, by stimulating a more exact scholarship and a more minute philosophy, it urged on the human mind to inquiry and to rebellion.

Just as the stream of this revival was in full flood, the reformation came, and separated the culture of Protestants from that of the old church. We do not sufficiently realize what a wrench this was. We are so accustomed to regard Protestantism as a stimulus to independence and originality of thought, that we do not consider what a loss was at first suffered by the breach with the old religion. The whole culture of the middle ages was intimately connected with the church. If we take Dante as an example, who was steeped in all the knowledge of his time, we find that, in every thing he wrote, the ecclesiastical aspect is as prominent as the poetical. There is no moment when he has not an equal right to stand among the doctors of theology and with the poets of Parnassus. Those who broke with the church of Rome had to create a culture of their own, and the culture which

they created was naturally that which then prevailed in the church which they were leaving.

It was this that gave Melanchthon his importance in the reformation, and that earned for him the name of the 'teacher of Germany.' He was by nature an exact scholar. He was well read in both Greek and Latin. He may have intended to fill up the other divisions of learning, but both his taste and his powers led him to confine himself to those departments in which he excelled. He said to his school-boys, 'Whatever you wish to learn, learn grammar first.' He recommended the study of Cicero, Livy, Virgil, Ovid, and Quintilian, and among Greek writers, Homer, Herodotus, Demosthenes, and Lucian. He recommended the writing of Latin letters and Latin verses, with Latin speeches and themes for the more advanced students.

Melanchthon might have intended, if life lasted, to deal successively with other branches of the mediæval curriculum, but his own tastes and the success of his first efforts determined his whole career. He made the study of language in all its branches current coin for Protestants, but here he stopped.

Whatever may have been the influence of Melanchthon on Protestant schools, there is no doubt that they received their form from John Sturm of Strasburg, who was rector of Strasburg high school for forty-five years, from 1538 to 1583. We find his name in the pages of Ascham, and it is very probable that his plan of study formed the model on which the new college of Westminster was organized, but his influence extended not only to England but to all Protestant countries. He was a politician as well as a school-master; and was in constant correspondence with the leaders of the Protestant party all over Europe. His great powers were devoted to an elaborate plan for teaching the Latin language, in all its extent and in its fullest elegance, to school-boys. We have a complete account of

the organization of his school, and there is this remarkable fact about it,—the boys were not only made to proceed from step to step towards final excellence, but they were strictly prohibited from taking more than one step at a time. In the examinations which were held at the close of each year, it was not only a crime to have omitted to learn the set subjects for that period, but it was as great a crime to have learned more than had been set. Not only was the human mind tied and bound within the limits of a curriculum, but individual minds were prohibited from outstepping the limits of that curriculum in any particular. Sturm must be regarded, more than any one else, as the creator for Protestants of the classical system of English public-school education as it is remembered by many who are still living. In this system, boys began to learn the Latin grammar before they learned English grammar; they were set to do Latin verses before they could write Latin prose. The Latin taught was not the masculine language of Lucretius and Cæsar, but the ornate and artificial diction of Horace and Virgil, and, above all, of Cicero. There is no doubt that this system, narrow and faulty as it was, gave a good education, so long as people believed in it. To know Horace and Virgil by heart became the first duty of an English gentleman. Speeches in parliament were considered incomplete if they did not contain at least one Latin quotation. A false quantity was held to be a greater crime than a slip in logical argument. Cicero not only influenced the education of English statesmen, but had no inconsiderable effect upon their conduct. The vanity of self-inspection, the continual reference to what is dignified and becoming, coupled with a high-minded devotion to duty and a strong if somewhat romantic patriotism, distinguished English statesmen in the eighteenth century as much as they distinguished the great orator of Rome.

There is, indeed, much to be said for humanistic training as a discipline of the mind. It is true that it deals only with words, and its highest efforts are, to decide what expression is absolutely best under certain circumstances. It is no light thing to render an English sentence, ornate and idiomatic, into a Latin sentence which exactly represents its meaning and which is equally ornate and idiomatic. It is difficult to analyze the subtle tact by which a scholar decides a particular reading in a particular passage to be right and all other readings to be wrong, or by which he determines one Latin or Greek verse to be so decidedly superior to another, that their comparative merit admits of no argument or hesitation. Any number of competently trained scholars would agree together in a matter of this kind, and yet it is entirely beyond argument that not one of them, if cross-examined in a witness-box, could give reasons for his judgment which would satisfy a jury. The question is determined by the most delicate weighing of probabilities, by a subtle tact similar to that by which the most complicated operation of an artificer is carried on. Is not this the very process which we have to apply to the most difficult problems of life? The organon of mathematical reasoning is a far clumsier and blunter instrument than the organon by which humanistic difficulties are decided, while the organon of scientific reasoning is clumsier and blunter still. Mathematics deals for the most part with things which can be accurately apprehended by the mind. It aims, more than anything else, at exactness, and although in its higher branches it admits hypotheses of probability, yet its principal object is certainty. Science goes farther than this; it not only admits certainty of apprehension, but it claims that it should touch, see, and handle the matters with which it deals. Few results can stand this coarse analysis. If biology and chemistry refuse to acknowledge any truth which cannot be demonstrated to the senses, they put out of their

reach those truths which are the most important to know, and which can be arrived at by probability alone. If mathematics admits of demonstration which shall give a clear proof to anyone who asks it, it removes from its sphere those judgments which rest upon the trained instinct of experts, and which can only be made clear to one who has undergone a similar training.

Regarded from this point of view, humanism was no bad preparation for active life or for devotion to any other study. It had the advantage of being small in compass, and of limits which were easily ascertained. Devotion to humanistic studies, properly understood, did not exclude application to other studies which might be considered more grave and important. William Pitt, chancellor of the exchequer at twenty-two, prime minister at twenty-four, was a first rate humanist, as he was an excellent mathematician; but this did not prevent him from being an admirable orator, a close reasoner, a profound student of history and politics, and a political economist far in advance of his time. Much as we may regret that education in Protestant countries, especially in England, Holland, and Sweden, was narrowed by the humanistic tendency, we must not refuse to give that training all the credit which it deserves.

II

Humanism, in the hands of Sturm and his followers, was at least intelligible and masculine. Although it was founded upon a narrow basis, its aims were clear and honest. In the next two hundred years, humanistic teaching was to undergo an influence of a very different character, which, maintaining the outward show, changed the substance and turned what was a modified blessing into a decided curse. The Jesuit schools founded in the sixteenth century obtained so much vogue in the seventeenth and eighteenth, that they influenced the whole of European education, Protestant as well as Catholic. They had one

title to respect, and one only. They were the first to bring the individual teacher face to face with the individual pupil. Whatever their objects may have been, and whatever were the ends for which they intended to use their influence, there can be no doubt that they did from the first what they still do,—attempt to study the workings of each individual mind and the beat of each single heart. Here their merit ends. They desired that the hearts of their pupils should be devoted to them, and not to humanity, and that their minds should never move out of the limits which they themselves should fix. Humanism lay ready to their hands. Here was a subject on which infinite ingenuity might be expended and endless time wasted. To become a complete master of the style of Cicero, Horace, or Ovid, might take a lifetime; yet the result was showy: few could understand its merits or the processes by which it was reached. To declaim on speech-day a long alcaic ode on the immaculate Virgin, or to turn the Song of Solomon into the language of Ovid's 'Art of love,' was an achievement which all might admire. The Jesuits were the inventors of that bane of humanistic education, the exaggerated reverence paid to Latin verse composition. What can be a worse training for the human mind? A mind is called well trained in language when it can conceive accurately the idea which it wishes to express, and can express that idea in language which no one can misunderstand. The whole theory of original Latin verse composition is opposed to this. The pupil is set to write a copy of verses on a set subject, be it spring or winter, autumn or summer. His notion of what he should say is very hazy, but under pressure he will write down twenty so-called ideas for twenty lines of Latin verse. To expand these he will have recourse to his *gradus*, a book which the Jesuits have the credit of inventing. He will there find so-called synonyms of the Latin words he has chosen, which cannot really express the same sense,

for in any language very few pairs of words are to be found with precisely the same meaning. If his synonyms are insufficient for the purpose, he will fill up the line with epithets chosen from the *gradus*, not because they are just, or appropriate, or needful, but because they scan. If these are not enough, his handbook will furnish him with phrases of greater length, bearing more or less upon the subject, and even with entire verses which he may introduce, so far as he can do so without fear of detection. To spend much time on this process is to play and juggle with the human mind, to make pretence at thought when there is no thought at all, to mark time instead of marching, to work a treadmill that grinds no corn, to weave a web which must be perpetually unravelled; yet in the latter half of the eighteenth century we see original Latin verses the chosen task of school-boys and a too frequent pastime for statesmen.

Let us not condemn all composition in dead languages. To turn the masterpieces of modern poetry into an exact Greek or Latin equivalent may be the worthy occupation of the best-trained scholars. It has more than once happened that the copy has been more poetical, more musical more worthy, than the original itself. Nor is imitation of any literature which we are studying to be despised. The Italian sonnets of Arthur Hallam, the French lyrics of Swinburne, if not genuine poetry, are at least precious fruits of the poetical mind. But if these fruits are to be produced at all, it is necessary that they should be produced without compulsion. Train your scholar in the best examples of Greek and Latin, let him study Virgii, Homer, and the Greek tragedians night and day, show him all the poetry they contain, let him compare them with the best productions of his native tongue, and the probability is, that, if he has any creative faculty, he will begin to imitate and will write Greek and Latin verses without coercion. But set him down on a form with fifty

other boys, and bid him write poetry on a subject for which he does not care, in a language which he does not understand and which is often unfitted to the thoughts which he has to express, guide him by mechanical rules, and assist him with mechanical handbooks: you will then find that what ought to have been a pleasure has been a barren toil, and that his mind is dulled by the effort. Even at the present day, after all that has been written against Latin verses by those who are most fit to judge, they hold an inordinate place in English classical education, and give us good reason to pass the strongest condemnation on the sect which introduced them.

The falseness of Jesuit principles of education goes further than this. They can best be judged on the great annual festival when the parents are invited to see the triumphs of their children. Speeches in different languages are delivered by children of various ages, often with a pathos that draws tears from those who hear them: this is a good part of their training. The head boy reads out the list of those who have gained prizes. After reciting a string of names, he suddenly pauses thus attracting the attention of all present. The prefect of studies, who stands behind him, comes to his rescue, and utters the boy's own name, which he has been too modest to pronounce himself. Had he repeated it among the others, it would have attracted no attention, but the modesty which avoided the appearance of self-laudation was used to extort the applause of the multitude.

The boys are examined *viva voce*. Nothing can be more fair. Any one at random is asked to take a Virgil or Sophocles, to submit any passage for translation, and to ask any questions he pleases. If the examiner does his work honestly, he soon finds what a mistake he has made. He submits a passage for translation. The boy makes a mistake; the examiner stops him. The boy blunders; the examiner insists upon a correct translation, which

takes a long time in coming. There's general discomfort and confusion. The whole sympathy of the audience is with the good-looking ingenuous youth on the platform, and not with the bald-headed pedant who is examining him. The examiner asks a question; the boy answers it wrong. As often as the examiner rejects the answer given to him, so often does the impatience of the audience arise against the stupid man who does not know how to ask questions that the boys can answer.

If the Jesuits had no faults of their own, they at least deserve the condemnation of posterity for suppressing their rivals the Jansenists, who offered to France the best opportunity of receiving a humanistic education devoted to the noblest ends. The object of the distinguished men who founded the little schools of Port Royal was exactly the opposite to that of their Jesuit rivals. They desired to make the moral character of their pupils strong and independent, and to train their intellects from the first in the severe studies of close and logical reasoning. In the individual attention they gave to their pupils, they were superior even to the Jesuits. The whole number of children that passed through their schools was small; and no teacher was allowed to have charge of more than five or six, while the masters were thus able to study the characters and capacities of their pupils in the minutest details. Pains were always taken to avoid undue familiarity. Between the pupils themselves, as between their professors, there was to reign a dignified and temperate courtesy, removed equally from sickly sentimentality and from rough and boisterous good-fellowship. The grammar of Port Royal was not a collection of rules to be learned by heart, but a treatise on logic, which forms the basis of all grammar. Where rules or examples had, of necessity, to be learned, they were, in disregard of precedent, placed in such a form as to be most easily remembered. The Jansenists were guilty of another innovation which gave a great handle to their

opponents. They taught the dead languages of antiquity from the living tongue of their own France. What impiety, said the Jesuits, thus to vulgarize studies which ought never to be presented to us without solemn and even sacred associations! We hear little or nothing in the Port Royal schools of the cultivation of Latin verses. The air which they breathed was too bracing for that trivial exercise. On the other hand, they did great service to the study of Greek. It is true that the Jesuits maintained Greek as a prominent study in their schools, which the University of Paris had been compelled to surrender by the clamor of parents. Yet the 'Garden of Greek roots,' an attempt to popularize the study by imparting the most necessary knowledge of Greek in French verses, remained for a long time a standard school-book, and was used for that purpose by so careful and exact a scholar as the historian Gibbon. If the Jansenist schools had been suffered to exist, they might have profoundly affected not only the course of study in France, but the minds and characters of Frenchmen. European nations, in following the French models of excellence which reigned without dispute before the French revolution, might have had a more masculine type held up for their admiration. This, however, was not to be; and French literature, impregnated with Ciceronianism, had been but slightly touched with the chastening influences of Hellenic studies or of logical precision.

Humanism has undergone many changes in the last generation, and it is difficult to forecast its future. The position which it held in education after the revival of learning was due to two opinions about it, which were believed very generally, but not always very consistently. On the one hand, it was thought to be the best gymnastic for the mind, the best mechanical exercise which the human faculties could be put through. On the other hand, the literatures of Greece and Rome, which were the sub-

ject-matter of humanism, were regarded as absolutely the things best worth study, not only from their intrinsic merit, but from their forming the best introduction to all modern studies. Not many years ago modern geography was taught in the most distinguished of English schools by what was called a comparative atlas and a comparative geography-book. Ancient geography was taught first as the thing most needful, and modern names were only dealt with as the correlatives of ancient ones. A good English style was supposed to be acquired from the study of classics. Latin verses formed the best introduction to English poetry; Latin themes were the best method of learning all general information. Even now at our universities many people would maintain that the science of modern statesmanship could not be better learned than from Aristotle's 'Politics.' Both these points of view have suffered rude shocks. Undoubtedly from considerations which were indicated above, Greek and Latin, and Greek especially, do form an admirable training for the mind. Latin grammar is more precise, more logical, and in these respects harder, than the grammars of modern languages. The Greeks were probably the most gifted people who ever lived, and their language was adapted in a wonderful manner to express most perfectly their most subtle thoughts. To a mature scholar, who recognizes every shade of his meaning, Thucydides will appear untranslatable. The words as he puts them down, whether grammatical or not, express precisely what he intends to say, with a vividness and a directness which cannot be surpassed. To express all that he would tell us in English would require long clumsy paraphrases, and even these would not express it altogether. The effort made by a modern mind to follow in its subtlest folds every sinuosity of the thought of Plato or Aristotle is in itself a very valuable training; but to profit by this training, a considerable standard in the languages must have been reached, and as

years go on, the number who reach this standard is fewer and fewer. The foundations have been undermined, boys and parents avoid the trouble of learning dead languages, and teachers are ready to escape the trouble of teaching them. The result is, that only the chosen minority are in the position of profiting by a training which was once universal; and these have such distinguished and apprehensive intellects that they would almost always make a training for themselves.

If humanism has suffered by the growth of a disbelief in its powers as a gymnastic, there is no sign that its intrinsic worth is rated less highly than it was. Indeed, as we begin to appreciate more exactly the necessary elements of culture, our respect for humanism grows greater. We are told that there are two great elements in modern civilization,—Hebraism and Hellenism. There is no fear at present that the first will not be well looked after. No Christian country is without an efficient church establishment; and the training of the clergy in all their several degrees, who are the chosen guardians of Hebraism, is more extensive and more satisfactory than in previous generations. Take away Hebraism, and the most valuable part of our intellectual furniture which remains is Hellenism. That can only be preserved by the combined efforts of all those who are indebted to it, and who have learned its value. This is the special function of schools and universities. It is remarkable that each attack made on the study of Greek has produced some new effort to make the study of Hellenism more general. The establishment of the English Hellenic society was the direct result of an attempt to exclude Greek from the entrance examinations of the university. The growth of science has been coincident with the revival of acted Greek plays, both in England and America. The dead languages which were once revered as a training are now valued for what they can teach us; and scholarship is defined, not as the

art of interchanging in the most ingenious manner the idioms of the Greek, Latin, and English languages, but as the calling-back to life of the Hellenic world in all its branches. Hellenism need not always mean the study of Greek life and thought. Egyptian culture preceded Hellenic culture. The Greeks went to study in the schools of Egypt, as the Romans frequented the universities of Greece, and as the English visit those of Germany. As the learning of the Egyptians, whatever it may have been, has been absorbed for our purposes partly by Hellenism and partly by Hebraism, so Hellenism itself may be absorbed, so far as it deserves to be, by modern literature. One who knew Milton by heart would be no poor Hebraist, and he who possessed the whole of Goethe would be no mean Hellenist. But this time has not yet arrived, if humanism suffers now from a slight obscuration, due to its unfortunate attempt to claim too much mastery over the human mind; yet there is no fear of its being materially obscured, and the assistance which it may yet render the human race, in her search after the good, the beautiful, and the true, should command the sympathy, and stimulate the efforts, of every man to whom those objects are dear.

REALISM.

Shelley, once writing to Godwin, expressed his surprise that so much time and thought had been given to the teaching of words, and so little to the teaching of things. Under the influence of Sturm and the Jesuits, humanism, or classical education, degenerated into a mere study of words. Little attention was paid to what was said: the chief point was how it was said. Cambridge undergraduates thirty years ago, taught by the most distinguished scholar in the university, when they read a Greek play or a Latin poem, heard little about the plot, or the allusions or their relations to modern writings of the same kind.

Attention was exclusively paid to readings, to the delicate variations in the meanings of words, to grammatical forms, to letters and accents; yet the teacher was a man full of love of English and other literatures, and steeped in the knowledge of them. The best scholars turned out of the university were surprised to find, as a result of their training, how little they knew of the literary masterpieces, which they had spent a great portion of their lives in learning to construe. The main aspects of ancient life were entirely unknown to them, unless accident had led them to learn them. Yet the teaching of things rather than words had been advocated by great educationalists, both abroad and in England.

The typical realist in education is Comenius. His whole life was devoted to the improvement of educational methods. He was one of the first to appeal to the eye as an instrument of instruction; but his most important work was the 'Great didactics,' a complete treatise on the art of education. The central idea of this book was that the education of every man should follow his natural growth. Take the whole circle of sciences with which the mature man can be acquainted,—arithmetic, geometry, astronomy, ethics, politics, and many others,—what are these but names for departments of knowledge, which the human mind creates for itself? If we take away from them their repulsive appellations, and consider them in their simplest elements, we find that they are nothing but what the child learns from its earliest infancy. 'Metaphysics' is a hard word, yet what is it except the science of ideas as apprehended by the mind? A child four years old was once lying in bed, recovering from an illness, when its father and mother came to the bedside. The child described the feeling it had in its leg. The father said, "That is pins and needles." The child thought to itself, "How can my father make so rash a statement? What he means, expressed in accurate language, is, that what I am describ-

ing sounds to him as the sensation which, if he felt, he would call pins and needles ; yet how can he tell that the sensation which I am now feeling is the same as that which he denotes by that name ?" There was present to the child's mind the whole problem of the relativity of knowledge, yet that has sometimes been found hard even for men to grasp. In the same way, what is the knowledge of natural phenomena, such as fire, rain, and snow, but the knowledge of physics ? What is the ability to find his way about his own village but the rudiments of geography ? What are his family annals but the beginnings of history ? The government of the household would teach him domestic economy, the administration of his native town would teach him politics, the rules of simple behavior would teach him ethics : take away the bugbear of repulsive nomenclature, and you will find every science can be studied in its simplest elements from the beginning of life. Comenius regarded the sciences which were accessible to human knowledge as an ever-widening circle, to be learned by child, boy, and man in the measure for which their strength is adapted. When it is possible in this way, by following the course of nature itself, to arrive at the knowledge of every thing that is worth knowing, why should we confine the growing mind in the trammel of mere language ? From the mother's school the child would pass to the national school ; one existing in every house, the other in every parish. From this he will go, as years advance, to the gymnasium, which is to be found in every large town ; and thence, if strength admits, to the university, which exists in every province.

The didactic theories of Comenius met with a strange fate. His manhood was nearly coincident with the thirty-years' war, which made educational experiments impossible in Germany. He came to England just as the civil war was breaking out. That did not prevent his proposals from attracting the attention of the parliament ; and they

would have given him for his experiments some large college, either in town or country, had not political troubles made it impossible to do so. He was taken up by the Protestant powers of Europe, partly because they represented the greater spirit of progress, and partly because they were opposed to the exaggerated humanism of the Catholics. Had he lived a hundred years earlier, the effect of his teaching would have been far more powerful. Had Comenius, instead of Melancthon, been the preceptor of Germany, Catholics and Protestants might have been divided in education, as they were in religion, but the world would have been enriched by a training of wider scope and greater possibilities. Thwarted by the political troubles of his time, his teaching never arrived at its full development, and had little effect upon the world until it received a new shape at the hands of Pestalozzi and Froebel.

The learning of things instead of words found a powerful advocate in England in the person of John Milton. His 'Tractate on education' is one of the most gorgeous dreams of a complete training ever conceived and elaborated by an educational theorist. He admits that it is right to learn the languages of those people who have at any time been most industrious after wisdom, but he asserts that language is only the instrument which conveys to us things useful to be known. "Though a linguist," he says, "should pride himself to have all the tongues that Babel cleft the world into, yet, if he have not studied the solid things in them as well as the words in lexicons, he were not so much to be esteemed a learned man as any yeoman or tradesman, competently wise in his mother dialect only." He defines a complete and generous education as that which fits a man to perform justly, skilfully, and magnanimously all the offices, both private and public, of peace and war. The Latin language, taught with the Italian pronunciation, is to lay the foundation of

good morality, "infusing into their young breasts such an ingenuous and noble ardor as would not fail to make many of them renowned and matchless men." Varro and Columella are to teach, not only Latin, but agriculture,—how to recover the bad soil and to know the waste that is made of good. Aristotle and Pliny are to give instruction in science. Mathematics, comprising arithmetic, geometry, astronomy, and trigonometry, have a separate course of their own, from which progress is to be made to fortification, architecture, engineering, and navigation. Theoretical studies in these and other similar branches are to be supplemented by practical training given by experts in the several pursuits. Not until this broad foundation of theory and practice has been laid are the pupils to read the works of those poets who treat of country lore. The next stage is to lay the foundations of philosophy and ethics, the knowledge of virtue and the hatred of vice. Plato, Xenophon, Cicero, Plutarch, are to be read, not for their language only, but for the ethical teaching which they contain. After ethics succeeds rhetoric, to form the tongue and the imagination of the future orator. Italian is used to give a soft and melodious pronunciation; Greek and Latin tragedies, with the humanists the food of school-boys, are reserved for the completion of the rhetorician's art. To this succeeds the study of politics, learned from the great masters of law from Moses to Justinian, continued down to the laws of our own constitution. Sundays are now to be spent in the higher branches of theology, and the scriptures are to be read in their original tongues. Not till now comes the study of history and poetry, mixed with a certain amount of logic; and then, and not till then, are the scholars permitted to write for themselves. Original composition, instead of being, as among the Jesuits, the principal mental discipline even of young children, is to be reserved until the mind has been thoroughly penetrated both with matter and with manner.

A large portion of the proposed training is devoted to exercise. "In those vernal seasons of the year," says the poet, "when the air is calm and bracing, it were an injury and sullenness against nature not to go out and see her riches and partake in her rejoicing with heaven and earth. At this time the pupils might ride out with prudent and staid guides to all places of strength and commodities of building, and of soil for towns and tillage, harbors and ports for trade." Milton, in this vision of the future, does not intend to sketch a scheme of popular education, but one suited for select pupils and select teachers. It is strange that the advice of one who was himself a school-master should have been so much neglected by the brothers of his profession. This may be explained by the fact that Milton wrote for an age in which Latin was the universal language, the common means of communication between scholars. The troubles of the seventeenth century left little room for the application of his theories; and, when society had become sufficiently settled to adopt them, Latin had lost its place in the world of learning, and the standard of humanism had been raised aloft by the Jesuits.

The establishment of realism as an integral part of education is due to the French revolution, and it is inseparable from the name of Pestalozzi. There could not be a greater contrast than between Milton and Pestalozzi. Milton's educational scheme was derived, on the one hand from his poetical imagination, and on the other from his scorn for the shallowness and frivolity of some of the statesmen with whom he lived. Pestalozzi learned the principles of his art in the care of poor orphans and in the hard experience of his own checkered life. Milton's plan, like that of Plato, was adapted for a select number of rulers. Pestalozzi's plan was framed for the benefit of very little children, and has only been gradually seen to be applicable to all departments of education. In the year 1798, the village of Stanz, near the lake

of Lucerne in Switzerland, was burned by the French, and a great part of the inhabitants murdered, because they would not receive the constitution offered to them by the directory of Paris. The children who escaped the slaughter were left homeless and orphans, and Pestalozzi was asked to take care of them. He established himself in a large deserted convent, deprived of all means of sustenance. He lived with the children by day, and slept with them by night, sharing the poor food which could be got together for their common support. It was by this close contact with the child-mind that Pestalozzi, almost himself a child, learned some of the deepest secrets of education. No traveller should look down from the Rhigi upon the valley where Stanz lies, without reverencing it as the birthplace of educational ideas which are destined to revolutionize our system of training. Yet when I rang, a few years ago, at the convent-gate, the good sister of charity who opened the door for me had never heard of the name of Pestalozzi, and knew nothing of the great Christian work which had been carried on within her walls. The central idea of Pestalozzi was to train the mind through the senses. Humanism, dealing with words alone, had depended mainly upon the memory. Children learned long lists of Latin and Greek nouns, long rules of Latin and Greek construction. Pestalozzi had no books. One of his best materials for instruction was an old piece of tapestry embroidered with animals. The children were taught to see, to touch, to taste, to smell, and to report exactly what their senses had taught them. By ingenious methods the first simple operations of the senses were made to lead insensibly to the higher operations of the mind. Milton had recommended that the rudiments of mathematics should be taught playing, as the old manner was. Pestalozzi made this plan a reality. Pestalozzi taught us to make the fullest use of a keen observation of young children, of their quick apprehension of what

immediately surrounds them, and of their surprising power of retaining what really interests them. He also taught us to follow, in the most loving and even servile manner, the growth of each child's mind, and of the child-mind as a whole. Yet it cannot be said that he was very successful as a practical teacher, and many who have posed as his disciples have been great failures. To force children by compulsion to learn many things by heart is the easiest, and it is also the most stupid and the most unfruitful, method of education. To follow the growth of their minds, and to adapt the training of each instant to their needs, require the patience of a saint and the insight of a philosopher, and these qualities are seldom found.

Froebel may be regarded as one who has worked out with great minuteness and success a particular part of Pestalozzi's teaching. The kindergarten system, as it is called, rests upon the assumption that the senses of a child are to be first dealt with, and that it is by their means that the intelligence can be best aroused. Froebel starting with the care of very young children, was able to reduce their education to something like a system. They are taught by degrees to see clearly form and color; to imitate them in various ways; to distinguish by the touch hard and soft, cold and hot; to train their ears to delicate sounds, and their mouths to refined and expressive speech. Their restlessness is utilized for social drill and dances. A child is encouraged to imitate just what he understands, and no more. It is impossible to see a kindergarten class, even when composed of the youngest gutter children, without feeling that this must in time be recognized as the only fit education for the infant-mind.

But it is a mistake to suppose that the principles of Froebel are applicable only to the training of very young children. It is as natural for the brain to grow and to exert itself as it is for the arms and legs to stretch them-

selves. Our inherited traditional methods of education are too often the swaddling-clothes of the mind, which impede its growth rather than assist its development. In schools higher than the kindergarten we have yet to learn that pleasure is a far more potent instrument of training than pain. Many teachers value lessons for their very harshness and repulsiveness, and take no pains that the mind should pass easily from the known to the unknown with ever-growing delight and satisfaction. Far too much stress is laid on mere memory. Memory depends on interest. Children will recollect accurately whatever has deeply roused them at any time. If we secure interest, memory will follow of itself. Again: schools spend far too much time on a set course of study. Pestalozzi and Froebel learned all they knew by the slavish following of the growing mind. It is probable that in no two minds do the faculties develop in precisely the same order. That curriculum is best which is adapted to the greatest number of minds, but no curriculum could be adapted to all minds. Just in proportion as the course of study laid down in school is rigid and unalterable, so far will it fail to reach a large number of those for whom it is intended. Just as, in elementary education, payment by results is opposed to the whole spirit of Pestalozzi's and Froebel's teaching, so in our higher education we cannot obtain the highest level of instruction unless we assign a lower place to examinations.

There is no fear that in the present day realistic education—the learning of things instead of words—will be neglected. There may, indeed, be a danger lest we should teach things which are not the best worth learning, lest we should waste on mechanical arts or on the lower branches of science, powers which ought to be applied to the highest products of the human mind. Goethe tells us that Wilhelm Meister, a dreamy enthusiast, took his son Felix to be taught in the Paedagogic Province. On re-

turning a year afterwards to see how he was getting on, he could not at first find him; but, as he was in an open field, he saw in the distance a cloud of dust. The dust developed into a troop of horses; and out of this troop galloped the young Felix, riding a white bare-backed steed, from which he threw himself and fell at his father's feet. The rulers of the Province explained, that, having tried Felix at every thing else, they found that he was most fit for breaking horses, and therefore set him that task. We now see Goethe's dream realized, not only in technical education, but in the schools which are growing up over England for the training of young colonists. A boy is taken at fourteen, and taught how to build a house, to make his furniture, to manage a farm, to navigate a boat. This is realistic education with a vengeance; and the same might be said of mere technical training, where it does not rest upon the basis of general culture. Yet the extravagances to which this side of education may run are slight, compared with those which have for so many years formed the bane of humanism. Some exaggeration is required to redress the balance. It is difficult to secure improvements in education, and it is almost impossible to revolutionize an educational system. Educational theorists write as if a single child, willing to be taught every thing were dealt with by a teacher able to impart every thing. The reality is very different. Children are taught, not singly, but in masses; and in a crowd the standard of conduct is generally that of the worst rather than that of the best. To secure all the attention of a large number of children needs considerable gifts, and to force a large class into active co-operation with the instructor is what few teachers can do. Again: a small proportion only of teachers have any special gifts of insight, liveliness, or imagination. They can only carry out the methods in which they have been trained. Once more: every traditional system is protected by a large number of means and

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appliances for study which have grown up under its reign. The very perfection of the school-books makes it easier to study classical literatures and Greek and Roman history than any similar department of more modern date. The passive resistance of pupils, the absence of useful aids, the want of enterprise in teachers,—all militate against the substitution of a rational education, such as Comenius would have given, for the complete and elaborate drill in the arts of expression which we owe to Sturm and the Jesuits. America has been less spoiled than Europe by the influence of petty traditions; and it is there, perhaps, that we may look for the rise of a training which will begin with the kindergarten, will be inspired in its higher branches by the enthusiasm of Milton, will always pierce through the veil of words to the substance which the words are intended to convey, and, while training to the full the senses of the individual and his mechanical powers, will not fail to set the highest value on the best products of the human mind, and will never, in the pursuit of material science, undervalue the far dearer treasures of poetry and philosophy.

NATURALISM.

The two aspects of education which we have already discussed, have reference to the different ways of training the intellect. They are, however, both liable to degenerate into pedantry. With regard to the study of language, this statement needs little proof. It is difficult, under any circumstances, to reconcile an education which is merely linguistic with the preparation of the active business of life. Perhaps the best example of a such a training was the rhetoric of the Romans. Quintilian's famous treatise on education described the training of the orator, and it requires some reflection to discover how so narrow and restricted a course can be co-extensive with all that is demanded by the public service. It might, however, be so in imperial Rome. The business of Rome was to

govern subject populations. A Roman statesman would have occasion for oratory in the senate, at the bar, in the governing of the province. Given the traditional inspiration which would be imbibed from a race of rulers, and the practice of public affairs, with which every Roman patrician would be familiar from his childhood, the training of the orator in its widest acceptation might be the only addition which was considered necessary. Humanism, however, lay but little stress on the public use of knowledge which it gave. It taught dead, not living languages. The greatest scholar might live secluded from the world, and, as his erudition deepened, might become less fit either to influence or to understand it.

Realism was by its nature more closely connected with actual life; but that, too, might content itself with books, and the study of books produces book-worms. The rebellion against received opinions which followed the Reformation brought every thing into question, and the groundwork of education with the rest. As feudalism disappeared, there was more need of such an inquiry. In the middle ages the education of the castle had existed side by side was the education of the cloister. The knightly arts of shooting, hawking, swimming, riding and other bodily accomplishments, were taught to the young page, as the seven studies of the trivium and quadrivium were taught to the young monk. As years went on, the idle governing classes were gradually subdued by aggressive instruction. The schools of the Jesuits were eminently fashionable, and it became necessary to appeal once more to nature. Men of the world and philosophers said, in giving what we call a training to the mind, "Let us not forget that nature has determined the quality, and a large part of the development, of the mind which we aspire to train. If we do our utmost, we can effect but little: let us be quite sure, that, in attempting to produce this small amount of good, we do not cause real harm. Let

us educate, not for the school, but for life. Let us see what inherent force will effect for the mind and character of which we think ourselves master." There is some trace of this reasoning in Rabelais; but, although he is certainly an anti-humanist, he should be classed as a realist rather than as a naturalist. The three great naturalists in education are Montaigne, Locke, and Rousseau. Although their characters were very different, there is a strong similarity in their teaching. We will give a short account of the views of each. This is the more necessary, as naturalism is now rampant in our public schools, but its advocates and supporters have little notion to what philosophers they owe the principles which they enthusiastically support.

The contrast between monkish erudition and the training for the world given in the castle of a wise noble is shown by Rabelais in the contrast between the clownish awkwardness of young Gargantua, and the modest self-possession of the page Eudæmon, who, "although not twelve years old, first asking leave of his master so to do, with his cap in his hand, a clear open countenance, beautiful and ruddy lips, his eyes steady and his looks fixed on Gargantua, standing up straight, on his feet, began to commend him with proper gesture, distinct pronunciation, and a pleasing delivery, in choice Latin," whereas all Gargantua did was to cry like a cow, and hide his face with his cap. Rabelais also lays great stress on bodily exercises, and shows that he considers the training of the body quite as important as that of the mind.

The educational ideas of Montaigne are principally contained in two essays,—one on pedantry, the other on the instruction of children. The one deals with the objects of education, the other with its methods. Montaigne says that the end of education is not to fill the head with a mass of knowledge, but to form the understanding and

the heart ; not to burden the memory of the pupil, but to make him better and more intelligent. Antiquity presents us with well-educated statesmen and commanders, with philosophers fit for practical life. On the other hand, learning, which is only for show, is of no use to its possessor. If we only know what Cicero or Plato thought about a matter, we are merely the guardians of some one else's property instead of making it a possession of our own. We warm ourselves at our neighbor's fire instead of making one on our own hearth. We fill ourselves with food which we cannot digest. The most important object of education is independence. The scholar must be able to consider and to employ what he has learned in a hundred different ways. He must be taught to prove every opinion, submit to no authority as such. Learning by heart is no learning at all. Just as we cannot dance, ride, or fence without moving the body, so we cannot speak or judge with advantage without acting for ourselves. The mind must be supported by a healthy body. There must be no coddling or spoiling by foolish parents : the boy must be hardened to endurance and to pain. We are educating, not a mind and a body, but a man, who is compounded of the two. The pupil must be taught to mix with the world, to observe carefully every thing he sees. He must learn more from experience than from books. The character of great men is more important for him to know than the dates of their actions. The greater number of sciences which we are taught are of no use. The pupil must not become a bookworm, but all the conditions of his life—his walks, his meals, solitude, and society—must be made serviceable for his training. He must be taught to speak naturally, with strength and emphasis ; not by erudition, but by force of character and clearness of thought. For discipline we must use a kind severity, not punishment and compulsion. The school-life must be full of joy and cheerfulness. The

most important thing is to excite a desire for study. Fathers should stimulate their children by their own example, and not keep them morosely at a distance. Montaigne says that he was first taught Latin by conversation, and he recommends the same course for imitation. He tells us that when seven years old he was entirely ignorant of French, but he was well acquainted with pure Latinity, and that without books and without tears. From this sketch we find that Montaigne's object was to educate the man of the world. He wished to bridge over the gulf between the gentleman and the scholar, which existed in his time ; but he would produce a gentleman at any price, a scholar if possible.

We cannot tell whether Montaigne had a direct influence upon Locke, but there is no doubt that they agreed very materially in their views. The keynote of Locke's thoughts concerning education is a sound mind in a sound body. This, he says, is a short but full description of a happy state in this world. He that has these two has little more to wish for, and he that wants either of them will be but little the better for any thing else. The first thirty sections of his treatise are occupied with the training of the body. His maxims are summed up in the words, "plenty of open air, exercise, and sleep ; plain diet, no wine or strong drink, and very little or no physic ; not too warm and strait clothing ; especially the head and feet kept cold, and the feet often used to cold water and exposed to wet." The next hundred sections are devoted to methods of education, but there is nothing in them about books. Virtue, wisdom, and breeding are to come before learning. These are to be taught more by precept than by example. We are to guard our children against the evil influence of servants, and to rely particularly on the persistent effect of the home. Above all, we are to teach knowledge of the world. Much of the danger which surrounds young men arises from ignorance of the world.

A man forewarned is fore-armed. Breeding must come before book-learning. Teaching is for the purposes of life, and not for the school: *Non scholæ sed vitæ discimus*. The tutor you choose for your son should be a man of the world. Locke puts learning last, because he considers it as the least important learning. He says it must be had in the second place, as subservient only to greater qualities. Seek out somebody that may know how discreetly to frame his manners; place him in his hands, where you may as much as possible secure his innocence; cherish and nurse up the good, and, generally, correct and weed out any bad inclinations, and settle in him good habits. This is the main point, and, this being provided for, learning may be had into the bargain, and that, as I think, at a very easy rate.

The subjects which Locke selects for learning are very characteristic. He begins with reading, writing, and drawing. He then goes on to French and Latin; the latter to be taught in the same way as French, by conversation and without grammar. He then passes to geography, arithmetic, astronomy, geometry, chronology, and history. Then follows ethics, a certain amount of law,—chiefly civil and constitutional law,—rhetoric and logic, and natural philosophy. Great importance is attached to acquiring a good English style. Greek is omitted; for Locke says that he is not considering the education of a professed scholar, but of a gentleman, to whom Latin and French, as the world now goes, is by every one acknowledged necessary. "When he comes to be a man, he can learn Greek for himself. What a small percentage there is, even among scholars, who retain the Greek they learned at school!" The education thus commenced is completed by dancing, music, riding, and fencing. Every one should learn one trade at least, if not two or three. Gardening and carpentering are especially recommended, but not painting. The pupil is to be well skilled in accounts and

book-keeping, and his education is to be completed by foreign travel, which is to be deferred to an age when he can profit by it most completely.

Locke is a great enemy of those specious and spurious studies which were so much affected by the Jesuits. He is a declared enemy to Latin verses. "Do not," he says, "let your child make verses of any sort ; for, if he has no genius for poetry, it is the most unreasonable thing in the world to torment a child, and waste his time, about that which can never succeed, and, if he has a poetical vein, it is to me the strangest thing in the world that a father should desire or suffer it to be improved. Poetry and gaming, which usually go together, are alike in this too, —that they seldom bring any advantage but to those who have nothing else to live upon." He does not care any more for music, "which wastes so much of a young man's time to gain but a moderate skill in it, and engages often in such odd company that many think it better spared." Locke here would differ much from Milton, who gave music a more dignified place in his programme. In conclusion, Locke tells us that what he has written is designed for the breeding of a young gentleman, but that he is fully aware that every one cannot be educated in the same manner ; that each man's mind has some peculiarity, as well as his face, which distinguishes him from all others ; and that there are possibly scarcely two children who can be brought up by exactly the same method.

Although public schools in England educate their pupils very much according to the precepts of Locke, they probably do so unconsciously, and are very little aware whose example they are following. Many have heard of Locke's treatise on education, but few have read it or tried to understand it. Whatever effect he has had has been confined to his own country, and he cannot be reckoned as a great influence in Europe. Rousseau, on the other hand, burst upon the world with tremendous

force. 'Emile,' although its teaching about education is so little precise and systematic, has made an epoch in educational systems, and is the parent of Pestalozzi, Froebel, and the most modern educators of the present day. The keynote of Rousseau's system is to educate in accordance with nature : he may therefore be regarded as the chief of the naturalists. It is true that his conception of nature was warped by the principles of his philosophy. He considered that man in his natural state, as he came from the hands of his Maker, was perfect, and that he has been spoilt by civilization. This idea was present to the mind of Rousseau in his very earliest writings. By what means, he asks, are we to bring back the child of nature ? How are we to form that strange character, natural man ? Our particular care must be to provide that he is not prevented from being natural ; we must not educate him for any particular function, but merely for the art of living. A man must be taught, above every thing, to lead the life of a man, and that must be done not so much by precept as by exercise. In the time of Rousseau children of the upper classes were brought up entirely in an artificial atmosphere. This, he says, we must do away with : great social changes may be before us, and we must prepare our children to meet them. The reformation must date from the very birth : mothers must take to nursing their own children. He says, speaking of the unnatural society of his own time, "Once let women become mothers again, and men will then become fathers and husbands." As the child grows, the advice of Milton corresponds with that of Locke. He is to be brought up in the fresh air of the country, set free from bands and swaddling-clothes, taught to endure pain and hardship and change of temperature, he is to be fed on very simple food. The father has duties as well as the mother. As soon as the child is old enough to be influenced by the father's education, it is wicked of him to hand him over to another. Rousseau passes

the strongest condemnation on fathers who neglect their children, whereas he sets them the worst example by depositing all his children, as they were born, in the turning-box of the foundling-hospital. Unfortunately many fathers are so occupied that they cannot give their children the minute attention which is necessary for their education, so that there is no remedy but to find a tutor who will as nearly as possible supply the place of the father. The tie between tutor and pupil is to be of the closest character. The second book of 'Emile' is concerned with the education of a child up to twelve years of age. The principal object of this education is courage. The child must learn to bear suffering, and to put up with tumbles and knocks, without uttering a cry. Strength, health, and a good conscience are the objects to be aimed at. Do not reason too much with children at this age: they must be made obedient by authority, and reason will come later. The great object of this early education is to lose time. The child is not old enough for good impressions to be firmly fixed: we must be content with averting bad ones. A child is to learn the elements of property, that some things do and some do not belong to him; but of erudition he is to learn very little. At twelve years, Emile is scarcely to know what a book is. You have educated his character by strengthening his body: if he has the vigor of a man, he will soon have the reason of a man. During this age the process of hardening is to go on: he is to wear loose clothing, to go with his head uncovered, to lie on the damp grass when hot with exercise, sleep all night, to rise with the dawn, to know nothing but a hard bed, to fear no danger, to be accustomed to toil, unpleasantness, and pain, and to defend the soul with the breastplate of a strong body. Thus armed, he will not even be afraid of death. He is to be as much at home in the water as on dry land. He is to acquire arts which are found in the natural savage, the instinct of finding his way in dark places, of

measuring distances with eyes and feet, and of beating all those of his age by swiftness of foot. He is to learn the piano rather than the violin. He is to draw from nature, to learn geometry rather by observation than by definition, to learn singing by the ear rather than by the notes. His appetite is to be the measure of his food. The sense of smell is to be educated with all his other senses. At twelve years old, he ceases to be a child: we are now to prepare him for manhood. We find that he is fresh, lively, open, and simple; his thoughts are limited but clear; he knows nothing by heart, but much by experience; he has read more in the book of nature than in any other book; his wit is not on his tongue, but in his head; his judgment is better than his memory; he only speaks one language, but that sensibly. Others may speak better: Emile will act better. He does not follow formulas and authorities, but in every thing which he says and does he is inspired by his own good sense. There is nothing artificial in his manner and bearing, but they are the true expression of his ideas, and the result of his disposition. In this language, and much of the same kind, Rousseau sketches the child of nature. One would think again, that, like Locke, he is depicting the English public-school boy; but he could not have known any such, and the country gentleman who favors such institutions would rather follow any counsel than that of a dreamy revolutionist.

The intellectual education which Emile receives between the ages of twelve and fifteen is not less remarkable than his social training. Nothing is learned from books, everything from observation. The pupil is not asked to understand what he has taught, but to discover things for himself: for instance, as he takes his morning and evening walk, he is led to observe the course of the sun, how it rises and sets in different places according to the time of the year. In this manner he is led to ask questions about the course of the heavenly bodies, the form of the earth,

and the calculation of eclipses. For the study of geography, no maps are placed before him. Starting from his home, he is led to make maps for himself. In this manner the natural desire of the child for knowledge is taken as the starting-place for learning, which in itself is never allowed to be a burden or trouble. Just as growing plants require not only light, but heat, so the growing man needs not only instruction, but amusement. Emile finds out by himself the existence of the meridian line and the peculiarity of the magnetic needle. He observes that by rubbing amber, glass, or sealing-wax, he is able to attract pieces of straw. In this way he learns the properties of positive and negative electricity, and connects them with the magnet. Going to the fair, he finds a conjurer who draws a waxen duck in different directions over a basin of water by presenting to it a piece of bread : he soon guesses that the bread contains a magnet, and is able to imitate the trick to the astonishment of the conjurer. The conjurer takes his revenge by placing a stronger magnet under the table, so that the duck resists all Emile's efforts. The revelation of this trick is an avenue to still further knowledge. We see here that education is made not to depend on words, but on things. No formal instruction is given. Certain things are observed to take place, and the instruction lies in the conclusions which are to be drawn from them. In a similar way great importance is attached to what would now be called technical education. Emile is to have no books except 'Robinson Crusoe,' from whose example he is to learn how to supply all his needs. Instead of reading, he is to visit workshops and practise handicrafts : he will learn more in an hour's work than he would in a whole day's explanation. Even trades are to be estimated by their usefulness. The blacksmith is placed higher than the goldsmith : the baker is worth the whole academy of sciences. Emile must learn a trade. What trade is best for him? Agriculture is exposed to

too many casual losses. Many trades are merely the handmaids of luxury, and produce nothing worth having: others are unwholesome either from confinement or from the attitude in which they are practised. There are objections to the more violent trades, such as masons and smiths. The best of all is to be a cabinet-maker, which is useful, cleanly, and instructive. The modern development of technical education seems to have followed on Rousseau's lines, and to have placed working in wood in the first rank.

Thus, when his boy's years come to an end, he possesses, not a great number of opinions and accomplishments, but the capacity for acquiring them. Such learning as he has, is thoroughly natural. He does not know even the names of history, metaphysics, morals, but he is accustomed unconsciously to reason about all of them. He is industrious, moderate, patient, and courageous. He does not know what death is, but, if necessary, he would die without a sigh. He demands nothing from others, and is under no obligation to them, but stands alone and independent in human society. He has no errors but those which are avoidable, and no faults except those from which no man is free. He has a healthy body, active limbs, a mind free from prejudices, a heart without passion. He has been scarcely affected by self-love, the first and the most natural passion: he has lived contented and happy, and free, so far as his nature allows. Do you think, asks Rousseau, that a child who has thus reached his fifteen years can have lost the years which have preceded?

Rousseau's book produced a great effect throughout Europe. It is said that Kant, the philosopher of Königsberg, whose habits were more regular than the town-clock, suspended even his daily walk in order to read him, yet the practical teacher will learn but little from him. His principal effect lay in the strength by which he combated existing prejudices. When Rousseau wrote, education had

become not only formal and artificial, but hollow and frivolous. The French revolution might have altered this by its unaided force, but 'Emile' still remains the book in which the ideas of the revolution about education were expressed with the greatest eloquence and vigor.

What shall we say about naturalism in the present day? It is largely practised unintentionally. While different studies are struggling for the mastery, the natural desire for games and open-air activity occupies the field, and claims more and more of the pupil's life. In the vast development of modern industries requiring capacities of all kinds, some educationalists have seen an indication that special courses of teaching are unnecessary or useless. Nature, they say, and the pressure of the world's business, are the best teachers. How much skilled labor is demanded by a railway? Who trained the pointsman, the engine-driver? Who directed the complicated lines of trains, following and meeting each other with lightning rapidity, yet never colliding except by a terrible catastrophe? The teacher who follows the methods, either of humanism or realism, strives to make the best of the human mind intrusted to him. He wishes to develop its faculties to their highest point, to stimulate its natural capacity to its furthest limit. But when this is done, what guaranty have we that nature has any place for the instrument we have so carefully finished? If every mind were developed to the fullest extent which its powers admit of yet a large proportion of such minds might remain useless and barren, because they fitted into no place which human society supplies. Leave every thing to Nature, she will fashion the material better than you can, into the form in which she most requires it. This statement is a paradox; and, indeed, natural education is in its essence paradoxical. It will always have advocates and apostles, especially in times when there appears to be a danger of over-refinement or over-pressure; but the

wise educationalist will turn to it as a repository of cautions and warnings rather than as an armory of weapons fit for fighting against the ever-present enemies of ignorance and sloth.

THE ENGLISH PUBLIC SCHOOL.

The term 'public school' is difficult to define. In England it has a meaning different from what it has in America. The American public school is a school supported by the community, and open to all the world. When it is said that public schools are the back-bone of the American system of education, it is implied that there exists all over America a number of schools affording a liberal education, either free or very inexpensive, accessible to all classes of the community alike. An English public school implies something exclusive and privileged. A public-school man is different from other men. The question as to whether a particular school is a public school or not, depends not upon its size or its efficiency, but upon its social rank. The American public schools are day schools: the English public school in the strict sense is essentially a boarding-school. Our public schools are few in number, confined to particular districts, costly, and very diverse in individual character; yet it is said that they represent more completely than any other English institution the chief peculiarities of our national life. It is the public school that forms the typical Englishman: it is the ordinary boy of the upper classes who gives his character to the public school. We have to inquire, first, what are the English public schools? second, how did they come to be what they are? third, what are their principal characteristics, and what relation do they bear to the educational system of England?

When the English Government undertook, some twenty-five years ago, to inquire into the condition of our secondary education, nine schools were singled out from the rest as pre-eminent. These were Winchester, Eton, Westmin-

ster, Charter House, Harrow, Rugby, Merchant Taylor's, St. Paul's, and Shrewsbury. Captain de Carteret Bisson, in his valuable work 'Our Schools and Colleges,' apparently disputes the right of the last three, and reckons our public schools at six. These six, between them, do not educate much more than four thousand boys; and yet they are so typical of all schools which may have a claim to the title of public, that we may conveniently confine our consideration to them. Of these, Winchester dates from the fourteenth century; Eton from the fifteenth; Westminster, Harrow, and Rugby from the sixteenth, these three having all been founded within eleven years of each other; and Charter House from the seventeenth. Winchester, the oldest of the schools, has probably kept its character most unchanged. It has never been a fashionable or a court school. It has maintained unimpaired its close connection with New College at Oxford. Nothing can show more clearly the strength and unity of English traditions than the fact, that, five hundred years after the establishment of the two foundations of William of Wykeham, they should stand in the face of England, holding the highest place, one as a college, and the other as a school. Eton, the next on our list, is confessedly the first of public schools, but it was not always so. During the first eighty years of the seventeenth century, Westminster undoubtedly held the position of pre-eminence. Dr. Busby, who read the prayer for the King on the morning of Charles I.'s execution, and who refused to take off his cap in the presence of Charles II., was the first schoolmaster of his time in England. But Westminster was faithful to the Stuarts: Eton supported the cause of the Whigs. Its supremacy, beginning in the reign of William III., continued in that of Anne, reached its height under the Hanoverian kings. George III., took a strong personal interest in the school. Eton boys walked on the terrace of Windsor Castle in court dress, and the King

often stopped to ask their names and to speak to them. William IV., with boisterous good humor, continued the favor of his dynasty. He took the part of the boys in their rebellion against the masters, and he used to invite the boys to entertainments, at which the masters stood by and got nothing. During this period Eton became a political power in England. The upper school at Eton is decorated with the busts of statesmen who swayed the destinies of England, and who were the more closely connected together from having been educated at the same school. Chatham, North, Fox, Grenville, and Grey are among the ornaments of that historical room. Eton and Christ Church had the monopoly of education for public life, and the claim of the school to this distinction received its fullest recognition when Lord Wellesley, after a career spent in the most important offices of the state, desired that he might be laid to his last rest in the bosom of that mother from whom he had learned every thing which had made him famous, successful, and a patriot. Better known, perhaps, is the boast of his brother, the Duke of Wellington, that the battle of Waterloo was won in the playing-fields of Eton.

Charter House, established in London, has held since its foundation a position very similar to that of Winchester, not of great importance in politics or fashion, but highly influential and respected. These four schools were probably founded for the purposes which they have since succeeded in carrying out. Eton was always a school for the governing classes. Winchester and Charter House have received the uninterrupted support of the gentry and clergy of England. The history of Harrow and Rugby has been different. They have been lifted by circumstances into a position for which they were not originally intended. They were founded as local schools,—one in the neighborhood of London, the other in the heart of the midlands,—for the instruction, first of the

village lads, and then of such strangers as came to be taught. But they have reached, owing to special circumstances, a position equal to that of any of their rivals. Harrow emerged from obscurity in the middle of the eighteenth century, owing, as it is said, her success to head masters who were sent to her from Eton. Rugby is known throughout the world as the school of Arnold, who was head master from 1827 to 1841. Even before his time it had attained a high rank among English schools; but he, followed by a line of distinguished successors, left it in scholarship and energy of thought at their head. Rugby and Baliol are to English education after the reform bill, what Eton and Christ Church were before it. This sketch will show how different the genesis of our public schools has been, and what various courses they have pursued to arrive at the same conclusion.

We will now briefly trace the history of the education they aim at. Their curriculum is essentially classical: indeed, a public school man means, in common parlance, one who has been educated mainly in Greek and Latin. The two oldest schools, Winchester and Eton, founded before the Reformation, naturally began with monkish learning. There was a great deal of grammar and a great deal of church-going. The pupils were children, and were treated as such. Westminster was founded after, and in consequence of, the Reformation, and the breach with the old learning necessitated new arrangements.

The author of the Protestant curriculum of public education was John Sturm, the friend of Roger Ascham, the head master of the great school of Strasburg during a large portion of the sixteenth century. A complete account of Sturm's methods and organization is preserved, and we may be sure that its main outlines were adopted at Westminster and at Eton. Latin grammar and Latin style were made the principal subjects of education. The school was launched upon the full flood of humanism.

The connection between a scholar in the narrow sense, that is, a man not of erudition but of finished taste and polished style, and the gentleman, was now fully established. Sturm was so despotic in the arrangements of his school, that he not only laid down what boys were to learn at each epoch of their career, but he forbade them to learn any thing else. It was as great a fault to begin a subject prematurely as to neglect it in its due time.

Many of Sturm's arrangements are familiar to public-school men who are now living, but in the following century they underwent a further change. This was due to the Jesuits, who obtained their reputation partly by their devotion to the study of Greek, and partly by the pains they took to understand the individual character of their pupils. The Jesuits have probably done more harm to sound education than any prominent body of men who ever undertook the task. They had two objects in view,—to gain the favor of the rich and powerful, and to prevent the human mind from thinking. Humanistic education skilfully employed was an admirable instrument to this end. It flattered the pride of parents, while it cheated the ambition of scholars. The pre-eminence given in education to original Latin verses is typical of the whole system of the Jesuits. No exercise could be more pretty and attractive, or bear more clearly the outward semblance of culture and learning, yet no employment could more effectually delude the mind by an unsubstantial phantom of serious thought. The sturdy humanism of Sturm became corrupted by the graceful frivolity of the Jesuits, and in this condition public-school education remained until the efforts of a few obscure reformers, the genius and energy of Arnold and the growth of the new spirit in England, forced it into other channels.

Arnold is typical of the new public school, but we must distinguish between Arnold and the Arnoldian legend. Like other great reformers, his name has become a nucleus

round which the reputations of all other reformers, good as well as bad, have coalesced. The most prominent fact about Arnold is, that he was the first Englishman of quite first-rate ability who devoted himself to school-education. The traditions of Sturm and the Jesuits shrivelled up before the manly touch of a teacher who was fit to be prime minister. After his career no one could despise the profession of a school-master. What did Arnold actually effect? He taught boys to govern themselves. He substituted for a system in which the governors were allowed any license on condition that they denied it to everyone else, one in which the responsibility of the ruler was rated even more highly than the obligation of the ruled. He also taught boys to think for themselves, to pierce beyond the veil of words into the substance of things, to see realities, to touch and taste and handle the matter of which they had before only talked. Thus he produced a vigorous character and a manly mind. Rugby boys, on passing to the university, thought and acted for themselves. They might be pardoned if in the first flush of enthusiasm they acted priggishly and thought wildly. But Arnold's teaching contained within it germs of much which he had never contemplated, and of which he would have disapproved. It contained the germs of the modern civilized life in schools, of which Rugby knew nothing in 1840. Far, indeed, is the cry from that dim and crowded dining-room where boys, sitting at a bare table, wiped their knives on the iron band which surrounded it, and ate their meat and pudding off the same plate, to the luxurious arrangements of a modern preparatory school. It contained the germ of modern-side education. Arnold did not know that he was passing from Melancthon to Comenius, and that the study of things once set rolling would soon displace the study of words. It contained the germs of a new confidence and friendship between boy and master quite as different from the sly sentimentality

of the Jesuits as it was from the pompous neglect of the old-fashioned courtly don. It contained, alas! in germ the subjection of the master to the boy in standard, tastes, and habits, which threatens to be the ruin of our public schools. It crystallized also the idea, which otherwise might have disappeared, that a head master must be of necessity a clergyman, and that no school could be properly conducted unless its chief sums up in the pulpit every Sunday afternoon what are supposed to be the spiritual results of the week's emotions. It stamped also with permanence, by a natural misunderstanding, that conviction of a head master's autocracy which prevents the formation in England of a profession of education. The history of English public schools since Arnold is merely the carrying-out under varying circumstances of the teaching of his example, and the development, sometimes to disastrous ends, of abuses to which that example may seem to lend currency.

A few words only are needed in conclusion as to the present and future of our public boarding-schools. Nothing has altered their character more than their growth in numbers, which has been the result of popularity. In Arnold's time no public school except Eton exceeded three hundred boys. Arnold and his contemporary head masters might boast with truth that they knew every boy in the school by sight, his habits, his capacity, his friends. A school thus governed by one man, and penetrated by his influence, differed not only in degree, but in kind, from a school which has of necessity become a confederation. In a public school of Arnold's date games were still amusements. Formerly neglected and ignored by pedagogues, they became the nurse of every manly virtue when a more sympathetic eye was turned upon them. Tom Brown's School-days represents the heroism of the forties,—the high-water mark where boyish enterprise and independence reached their height under the influence of

manly recognition. During the last quarter of a century, games have become a serious business, instead of the wholesome distraction of public-school life. They are organized as elaborately as the work. Masters are appointed to teach them like any other branch of study: they form the basis of admiration and imitation between boy and boy, and the foundation of respect and obedience between boy and master. It is difficult to keep large numbers of boys, with only five years difference in their ages, quiet and wholesome without a large development of games. They have been admitted to their full share in the school curriculum. A public boarding-school is no longer a place where, amidst much liberty and idleness, there reigns a high respect for character and intellect, and where the ablest boys are left ample room to fashion each other and themselves. It is a place where the whole life is tabulated and arranged, where leisure, meditation, and individual study are discouraged, and where boys are driven in a ceaseless round from school to play-room, from play-room to school, regarding each as of equal importance, and bringing into the most delicate operations of intellectual growth the spirit of coarse competition which dominates in athletics.

It is difficult to say what changes public boarding-schools are destined to undergo, or whether in an age in which education is so much extended a system so expensive and so exclusive can continue to flourish. The last few years have witnessed the growth of large public day-schools, and any development of national education would be certain to increase their number. Although the Arnoldian system is little applicable to them on its best side, yet they are of necessity free from most of the abuses to which that system has given rise. An idea may grow up that the home is, after all, the best place for children, and that children are the best safeguard of a pure and happy home. Should English society in its new

development prefer a kind of education which is the normal type of all countries but our own, which improved communication makes it easier to adopt, we shall still have public schools of which we should be proud: they will continue to represent our best national qualities, but they will be very different from the public boarding-schools of the past.

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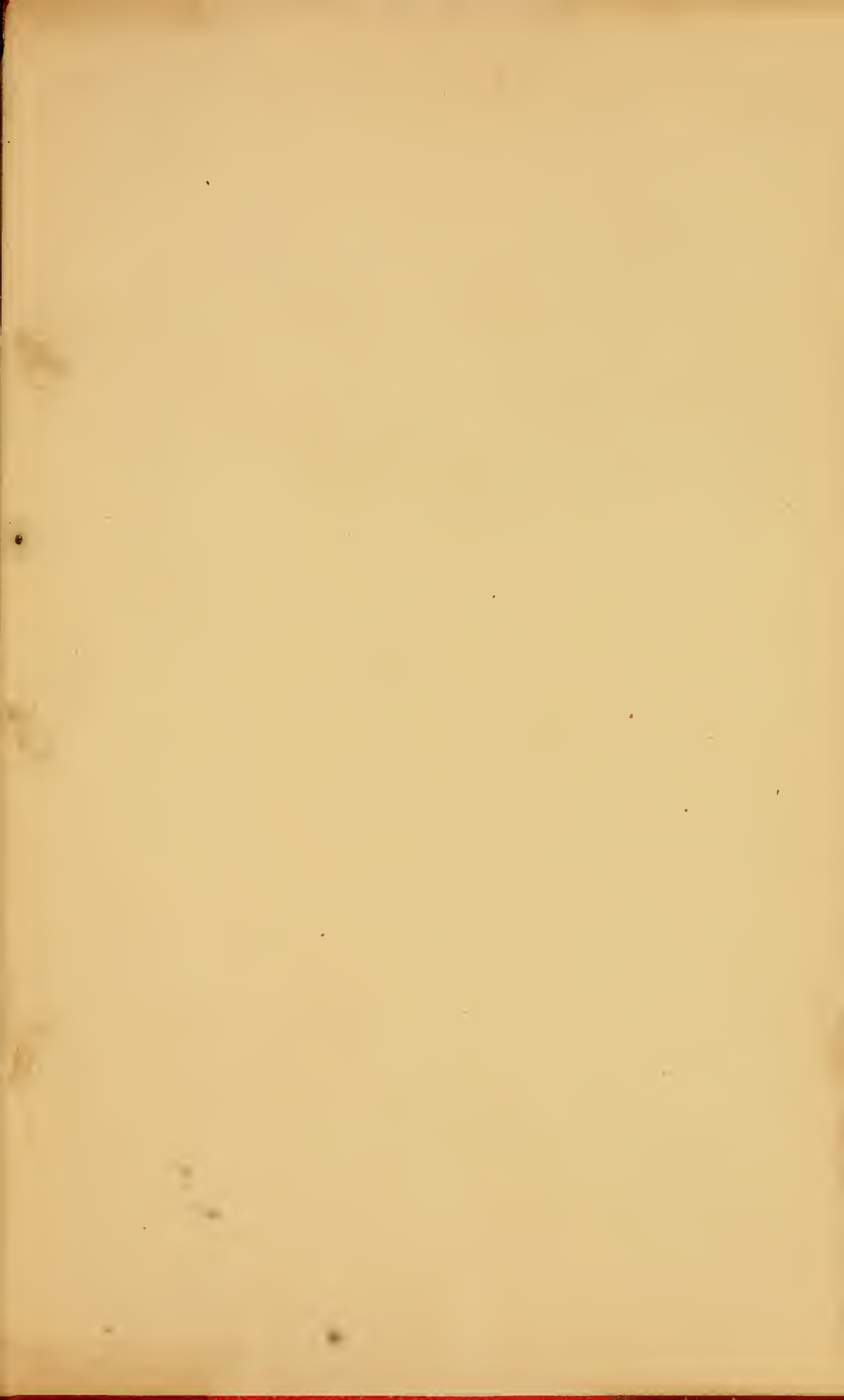
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